AMENDMENTS TO THE CLAIMS

1 - 8 (canceled)

9. (Currently amended) Method for determining forces and torques acting on a vehicle, comprising the steps of:

measuring signals from acceleration sensors which are fitted in longitudinal, transverse and vertical alignment, to one or more selected points on the vehicle, and

evaluating said signals which represent the spatial angular velocity of the vehicle and its time derivative, including at least one of the rolling, pitching or yaw velocity and including at least one of the rolling, pitching or yaw acceleration, [[and]]

applying a mathematic model of the vehicle in which forces and torques acting on the vehicle or selected components of these forces and torques are determined from the sensor signals, wherein said mathematical model includes summing tire contact forces on a first side of the vehicle, and determining when said summed value falls below a threshold at a current point in time or in a time extrapolation of the determined course of signals relating to the summed forces.

10. (Currently amended) Method as claimed in claim 9, wherein said step of measuring signals further includes using signals from a yaw rate sensor fitted to the vehicle.

11. (Currently amended) Method as claimed in claim 9, wherein said step of measuring signals further includes using a model-based logical operation of the measuring signals of several acceleration sensors, which are fitted to at least two different points on the vehicle.

12. (Currently amended) Method as claimed in claim 9, [[wherein]]further including calculating from the determined forces and torques that act on the vehicle wheel forces, or selected components of the wheel forces, or selected sums of wheel force components ~~are calculated from the determined forces and torques that act on the vehicle~~.

13. (Previously presented) Method as claimed in claim 12, further including the step of calculating wheel force components or sums of wheel force components directly from the measuring signals.

14. (Previously presented) Method as claimed in claim 9, further including the step of processing at least one transverse acceleration signal, one vertical acceleration signal and one roll angle velocity signal in the mathematic vehicle model for determining an imminent risk of rollover.

15. (Previously presented) Method as claimed in claim 14, wherein at least one sum of tire contact forces for the left side and another sum of tire contact forces for the right side of the vehicle is determined.

16. (Previously presented) Method of determining rollover maneuvers in vehicles with four wheels, comprising the step of:

summing the tire contact forces of one vehicle side, and

determining when said summed value falls below a threshold at the current point of time or in a time extrapolation of the determined course of signals relating to the summed forces.